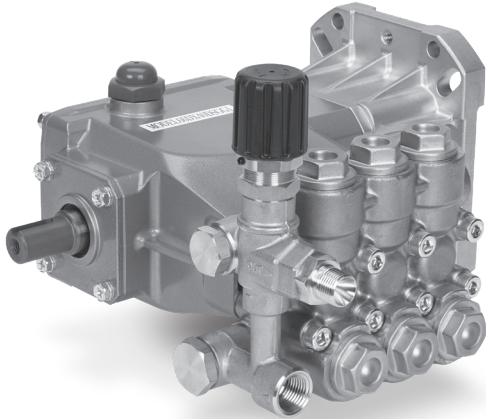


DATA SHEET

DIRECT DRIVE PLUNGER PUMP



Brass Model: 66DX40DSG1



SPECIFICATIONS	U.S. Measure	Metric Measure
Flow	4.0 gpm	15.0 lpm
Pressure Range	100 to 4000 psi	6.9 to 275 bar
Pump RPM	3400 rpm	3400 rpm
Inlet Pressure Range	Flooded to 75 psi	Flooded to 5.2 bar
Max. Liquid Temperature	140° F	60° C
Bore	0.551"	14 mm
Stroke	0.449"	11.4 mm
Crankcase Capacity	18 oz.	0.53 l
Inlet Ports (2)	1/2" NPT(F)	1/2" NPT(F)
Discharge Ports (2)	3/8" NPT(F)	3/8" NPT(F)
Shaft Diameter (Hollow)	1"	25.4 mm
Shaft Diameter (Solid End)	0.787"	20 mm
Engine Mounting Face	6.5"	6.5"
Weight	23.95 lbs.	10.9 kg
Dimensions	11.13 x 10.51 x 8.15"	282 x 267 x 207 mm

FEATURES

- Triplex plunger design provides a smooth liquid flow.
- Special concentric, high-density, polished, solid ceramic plungers provide a true wear surface and extended seal life.
- Compact flange mount permits easy, direct mounting to most gas engines.*
- Solid 20 mm shaft with M6 keyway.
- Modular regulating unloader with built-in by-pass is standard for safety and pressure setting.

*Gas Mounting Flange: SAE J609, Flange B, Extension 4 (1"Ø), Shaft Length= 3 1/4", Pilot Ø= 5 3/4", BC. Ø= 6 1/2", Thread 3/8"-16 UNC Tap.

DETERMINING THE PUMP R.P.M.

$$\frac{\text{Rated gpm}}{\text{Rated rpm}} = \frac{\text{"Desired" gpm}}{\text{"Desired" rpm}}$$

DETERMINING THE REQUIRED H.P.

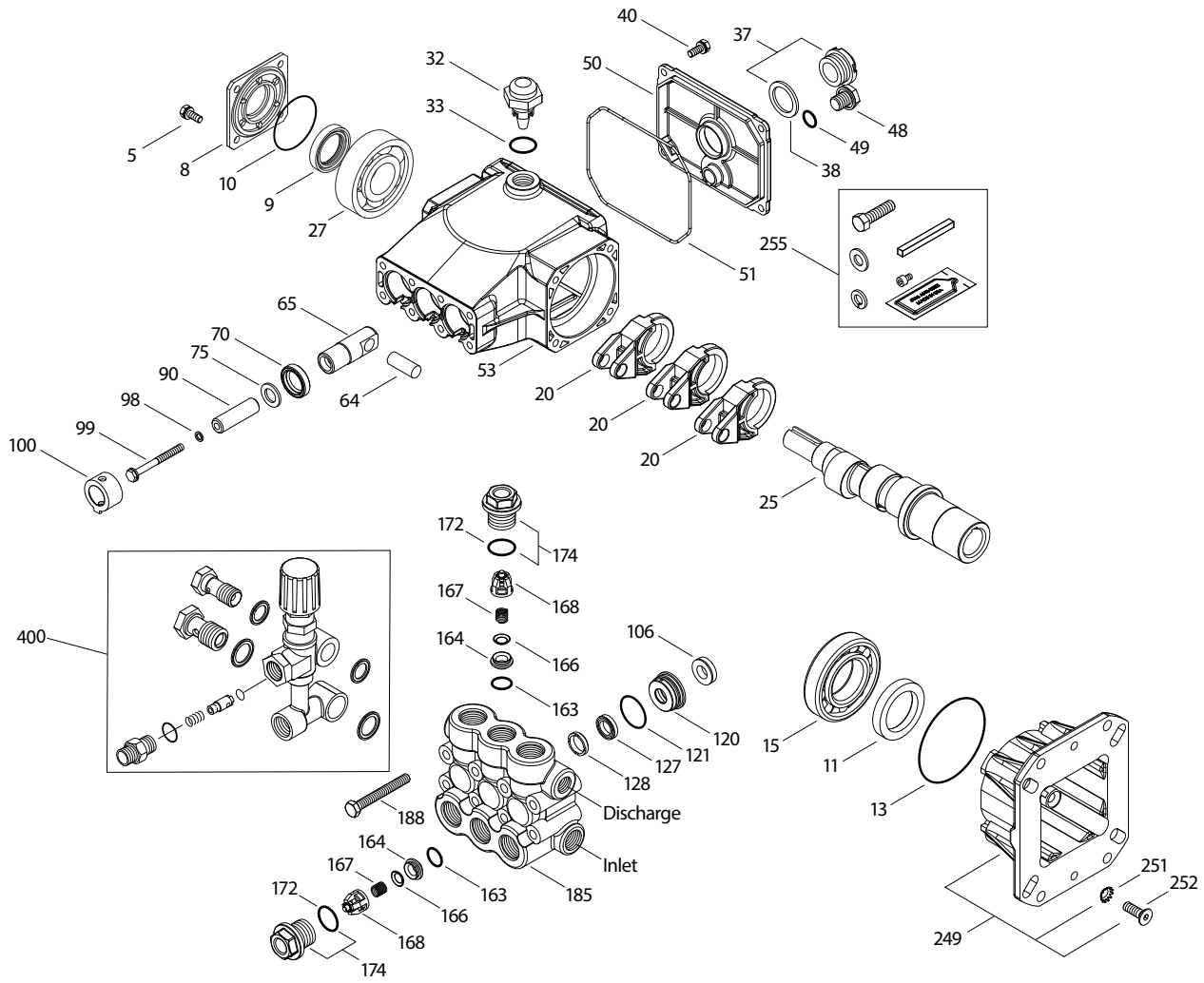
$$\text{Hp (Electric Brake)} = \frac{\text{gpm} \times \text{psi}}{1460}$$

DETERMINING MOTOR PULLEY SIZE

$$\frac{\text{Motor Pulley O.D.}}{\text{Pump rpm}} = \frac{\text{Pump Pulley O.D.}}{\text{Motor rpm}}$$

Refer to pump **Service Manual** for repair procedure and additional technical information.

EXPLODED VIEW



PARTS LIST

ITEM	P/N	MATL	DESCRIPTION	QTY	ITEM	P/N	MATL	DESCRIPTION	QTY
5	125824	STCP R	Screw, HHC (M6x16)	4	98	46730	NBR	Washer Seal, Plunger Retainer - 90D	3
8	46901	AL	Cover, Bearing	1	99	† 48201	SS	Retainer, Plunger	3
9	43222	NBR	Seal, Oil, Crankshaft	1	100	48755	NY	Retainer, Seal	3
10	14028	NBR	O-Ring, Bearing Cover - 70D	1	106	45188	NBR	Seal, LPS w/S-Spg	3
11	125351	NBR	Seal, Oil, Crankshaft	1	120	48759	BB	Case, Seal	3
13	14037	NBR	O-Ring, Bearing Cover	1	121	13980	NBR	O-Ring, Seal Case - 70D	3
15	146421	STL	Bearing, Ball - Inner	1	127	48758	SNG	V-Packing	3
20	48843	TNM	Rod, Connecting	3	128	48757	NY	Adapter, Male	3
25	134878	CM	Crankshaft 11.4 mm	1	163	17547	NBR	O-Ring, Seat - 85D	6
27	14480	STL	Bearing, Ball - Outer	1	164	45790	S	Seat	6
32	46798	—	Cap, Domed, Oil Filler	1	166	46429	S	Valve	6
33	14179	NBR	O-Ring, Filler Cap - 70D	1	167	43750	S	Spring	6
37	92241	PC	Gauge, Oil Bubble w/Gasket - 80D	1	168	† 44565	PVDF	Retainer, Spring	6
38	44428	NBR	Gasket, Flat, Oil Gauge - 80D	1	172	17616	NBR	O-Ring, Valve Plug - 80D	6
40	125824	STCP R	Screw, HHC (M6x16)	4	174	48760	BB	Plug, Valve w/O-Ring	6
48	25625	STCP	Plug, Drain (1/4"x19BSP)	1	185	48846	BB	Head, Manifold	1
49	23170	NBR	O-Ring, Drain Plug - 70D	1	188	126512	STCP R	Screw, HSH (M8x65)	8
50	48862	AL	Cover, Rear	1	249	48841	AL	Flange, Adapter	1
51	14048	NBR	O-Ring, Rear Cover	1	251	126746	STCP R	Lockwasher, Conical (M8)	4
53	48830	AL	Crankcase	1	252	46403	STL	Screw, FH (M8x25)	4
64	46404	CM	Pin, Crosshead	3	255	30510	STZP	Assy, Bolt Mount	1
65	48845	BB	Rod, Plunger	3	300	34262	NBR	Kit, Seal (Incls: 98,106,121,127,128)	1
70	48911	NBR	Seal, Oil, Crankcase	3	310	34260	NBR	Kit, Valve (Incls: 163,164,166,167,168,172)	2
75	48754	NBR	Slinger, Barrier	3	400	7861	BB	Unloader Assy	1
90	48752	CC	Plunger (M14x47)	3					

Italics are optional items.

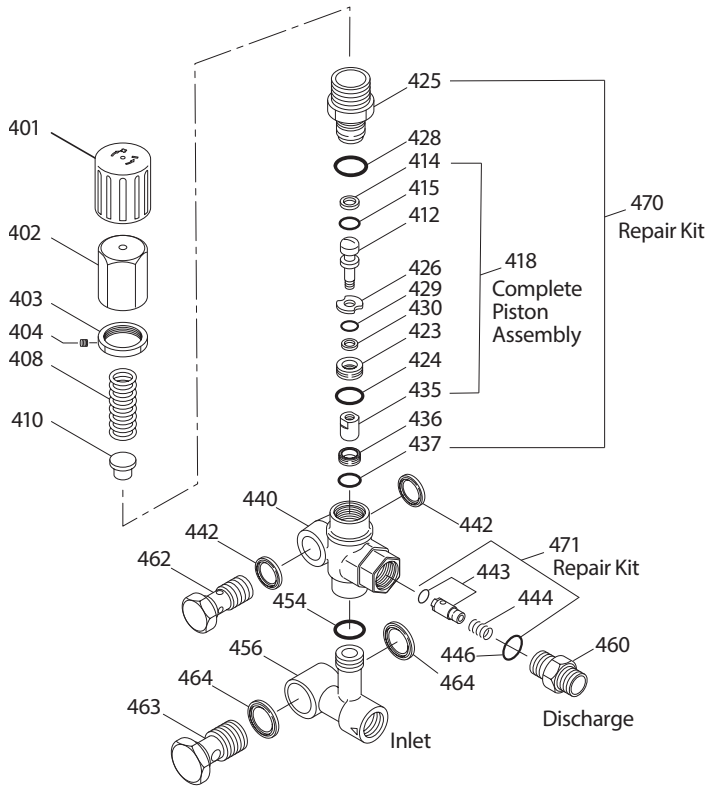
R Components comply with RoHS Directive. † Production parts different from service parts. View Tech Bulletins 024, 036, 055, 074, 083, and 101 for additional information.

MATERIAL CODES (Not Part of Part Number): AL=Aluminum BB=Brass CC=Ceramic CM=Chrome-moly NBR=Medium Nitrile (Buna-N) NY=Nylon PC=Polycarbonate

PVDF=Polyvinylidene Fluoride S=304SS SNG=Special Blend (Buna) SS=316SS STCP=Steel/Chrome Plated STG=Special Blend PTFE White STL=Steel

STZP=Steel/Zinc Plated TNM=Special High Strength

EXPLODED VIEW



PARTS LIST

ITEM	P/N	MATL	DESCRIPTION	QTY
401	49100	NY	Handle, Adjusting (Black)	1
402	49099	BB	Cap, Adjusting	1
403	125521	BB	Nut, Locking (M25x1)	1
404	88953	S	Screw, Set (M4x4)	1
408	45198	ZP R	Spring, Pressure	1
410	49101	STZP R	Retainer, Spring	1
412	—	S	Stem, Piston	1
414	—	PTFE	Back-up-Ring, Piston Stem	1
415	—	NBR	O-Ring, Piston Stem - 90D	1
418	—	BB	Assy, Piston (Included in Repair Kit)	1
423	49105	BB	Retainer, Valve	1
424	—	NBR	O-Ring, Valve Retainer - 70D	1
425	—	BB	Retainer, Piston	1
426	—	S	Washer	1
428	—	NBR	O-Ring, Piston Retainer - 80D	1
429	—	NBR	O-Ring, Valve Retainer - 70D	1
430	—	D	Back-up-Ring, Valve Retainer	1
435	—	S	Valve/Ball Assembly	1
436	—	S	Seat	1
437	—	NBR	O-Ring, Seat - 70D	1
440	—	BB	Valve Body	1
442	49121	STL	Washer, Seal (3/8")	2
443	—	BB	Valve, Check w/NBR O-Ring	1
444	—	S	Spring, Check Valve	1
446	—	NBR	O-Ring, Body - 80D	1
454	—	NBR	O-Ring, Manifold - 70D	1
456	—	BB	Manifold	1
460	126974	BB	Fitting, Discharge [3/8" NPT(M)]	1
462	49120	BB	Screw, Flo-Thru [3/8" NPT(M)]	1
463	49117	BB	Screw, Flo-Thru [1/2" NPT(M)]	1
464	49118	STL	Washer, Seal (1/2")	2
468	31708	NBR	Kit, O-Ring (Incls: 414, 415, 424, 428-430, 437, 446, 454)	1
470	31556	NBR	Kit, Repair (Incls: 418, 425, 428, 436, 437)	1
471	76185	NBR	Kit, Check Valve (Incls: 443, 444, 446)	1

Italics are optional items.

R Components comply with RoHS Directive.

MATERIAL CODES (Not Part of Part Number): BB=Brass D=Acetal

NBR=Medium Nitrile (Buna-N) NY=Nylon PTFE=Pure Polytetrafluoroethylene

S=304SS STL=Steel STZP=Steel/Zinc Plated ZP=Zinc Plated

MODEL 7861 UNLOADER

SPECIFICATIONS

	U.S.	Metric
Flow Range	3.0 - 5.0 gpm	7.6 - 19.0 lpm
PSI Range	700 - 4000 psi	50 - 275 bar
Inlet Port, Side	1/2" NPT(F)	1/2" NPT(F)
Discharge Port, Front	3/8" NPT(M)	3/8" NPT(M)
Weight	35.2 oz.	1.0 kg
Dimensions	4.65 x 170 x 6.75"	118 x 43 x 171 mm

UNLOADER TYPE

A modular regulating unloader comes with each 66DX pump to provide system pressure regulation and pump protection.

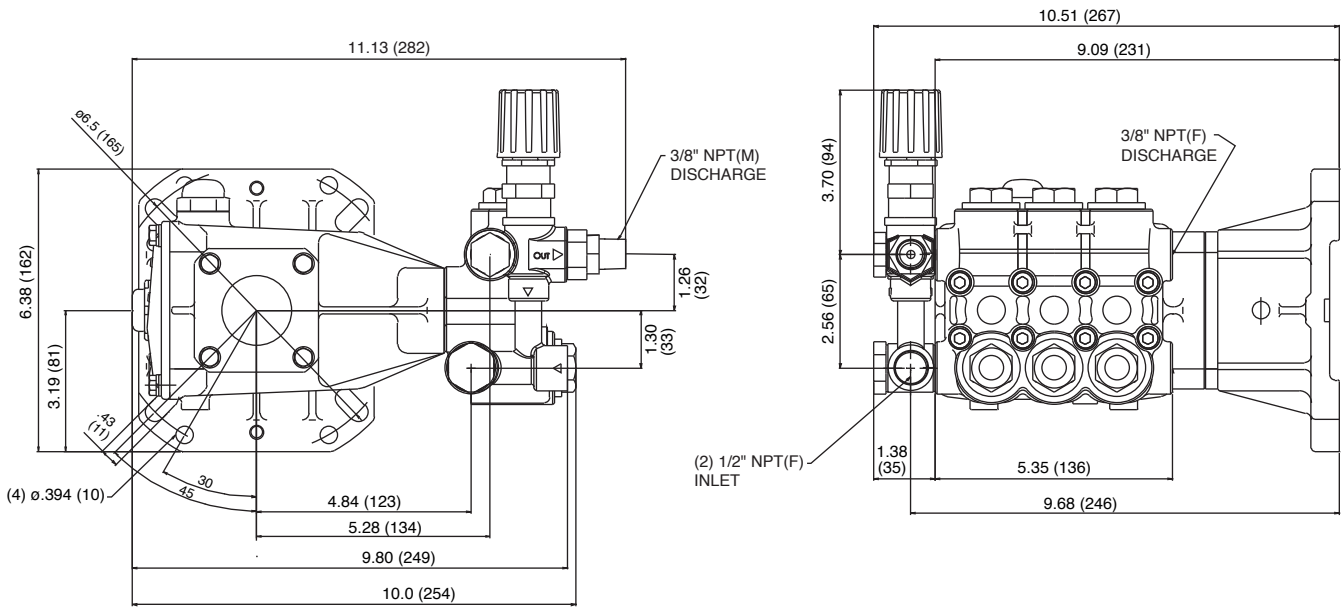
OPERATION:

Purge pump of air before commencing operation by allowing liquid to flow through the pump without discharge restriction. Removing trapped air will assure full system pressure can be obtained. Install a pressure gauge close to the manifold head of the pump to assist in setting system pressure and to periodically monitor system pressure. Setting and adjusting the unloader pressure must be done with the system turned on. Start the system with the unloader backed off to the lowest pressure setting (counterclockwise direction). Squeeze the trigger and read the pressure on the gauge at the pump. Do not read pressure at the gun or nozzle. If more pressure is desired, release the trigger, turn adjusting cap one quarter turn in a clockwise direction. Squeeze the trigger and read the pressure. Repeat this process until the desired system pressure is reached. Thread locking nut up to adjusting cap and tighten set screw. All high pressure systems should have a secondary relief valve. Set secondary relief valve 200-300 psi above the unloader setting.

NOTE: Pressure is not set at the factory.

SERVICE:

The unloader should be serviced on the same schedule as the seals in the pump. Refer to 66DX Service Manual for start-up, servicing of seals and valves, torque requirements and Diagnosis/Maintenance chart.



⚠ CAUTIONS AND WARNINGS

All High-Pressure Systems require a primary pressure regulating device (i.e. regulator, unloader) and a secondary pressure relief device (i.e. pop-off valve, relief valve). Failure to install such relief devices could result in personal injury or damage to pump or property. Cat Pumps does not assume any liability or responsibility for the operation of a customer's high pressure system.

Read all CAUTIONS and WARNINGS before commencing service or operation of any high pressure system. The CAUTIONS and WARNINGS are included in each service manual and with each Accessory Data sheet. CAUTIONS and WARNINGS can also be viewed online at www.catpumps.com/cautions-warnings or can be requested directly from Cat Pumps.

WARRANTY

View the Limited Warranty on-line at www.catpumps.com/warranty.



CAT PUMPS

1681 - 94th Lane N.E. Minneapolis, MN 55449-4324

Phone (763) 780-5440 · Fax (763) 780-2958 · e-mail: techsupport@catpumps.com · www.catpumps.com